

S/N: 09/595,778
Page 2 of 15

IN THE CLAIMS:

Please cancel claims 11 and 23, without prejudice or disclaimer.

Please cancel claims 26-32, without prejudice or disclaimer, as being drawn to a non-elected invention.

Please substitute the original claims with the amended claims provided below. A copy of the marked up amended claims is attached hereto:

- 31
5/25/02
91
-
1. (once amended) A method of processing a substrate, the method comprising:
- providing a substrate in a process chamber, the substrate having a surface;
 - introducing a gas into the process chamber;
 - energizing the gas by passing RF energy through a wall of the process chamber at a power sufficient to couple the RF energy from above an external surface of the process chamber to the gas inside the process chamber to energize the gas; and
 - detecting radiation from directly above the surface of the substrate after the radiation propagates through the wall and the external surface of the process chamber.
2. (once amended) A method according to claim 1 comprising energizing the gas by powering an antenna external to the process chamber at the power.
-

S/N: 09/595,778

Page 3 of 15

B2
5/20/02
D1

10. (once amended) A method of processing a substrate, the method comprising:

placing a substrate in a process chamber, the substrate having a surface;

introducing a gas into the process chamber;

inductively coupling RF energy through a ceiling of the process chamber at a power sufficient to couple the RF energy from above an external surface of the ceiling of the process chamber to the gas inside the process chamber to energize the gas; and

detecting radiation from directly above the surface of the substrate after the radiation propagates through a window in the ceiling and the external surface of the process chamber.

5/20/02
B3

12. (once amended) A method according to claim 10 comprising inductively coupling the RF energy by powering an antenna that (1) is substantially non-vertical, or (2) comprises a planar coil.

B 4/20/02

17. (once amended) A method of processing a substrate, the method comprising:

providing a chamber having an external surface that is at least partially dome shaped;

providing a substrate in the chamber, the substrate having a surface;

introducing a gas into the chamber;

inductively coupling RF energy at a power sufficient to pass the RF energy from above the at least partially domed external surface to the gas inside the chamber; and

monitoring radiation from directly above a surface of the substrate that propagates through the at least partially domed external surface during processing of the substrate.

S/N: 09/595,778

Page 4 of 15

21. (once amended) A method of processing a substrate, the method comprising:

placing a substrate in a first enclosure, the substrate having a surface;

introducing a process gas into the first enclosure;

powering an antenna to inductively coupling RF energy at a power sufficient to pass RF energy from outside an external surface of a ceiling of the first enclosure to the process gas inside the first enclosure to energize the process gas; and

monitoring a sufficient intensity of radiation from directly above the surface of the substrate from after the radiation has propagated through the ceiling and external surface of the first enclosure and into a second enclosure disposed above the first enclosure to determine a process endpoint.